

REMARKS

Reconsideration and allowance of this application, as amended, are respectfully requested. At present claims 13-19 are withdrawn from consideration.

Claims 1-12 stand rejected under 35 USC 102 as being anticipated by, or in the alternative, rendered unpatentable under 35 USC 103 based on Chen et al (US Patent No. 5,545,574). These grounds of rejection are respectfully traversed. In addition, the rejection of claims 11-12 as being unpatentable over Chen et al in view of Riseman (US Patent No. 4,356,211) is also respectfully traversed.

Claim 11 recites a method of manufacturing a semiconductor device that includes forming a first silicide film on the source-drain diffusion layer and a second silicide film on the gate electrode. The second silicide film has a thickness greater than that of the first silicide film.

On the other hand, Chen et al. describes a method wherein exposed surfaces 42, 44 and 46 are introduced to a nitrogen-containing material to form regions 52 and 54 on the source/drain regions 32 and 34 and to form a region 56 on the gate electrode layer 26 as shown in reference Fig. 5. For the Examiner's convenience, Chen et al Figures 4-7 are reproduced below.



U.S. Patent

Aug. 13, 1996

Sheet 2 of 3

5,545,574

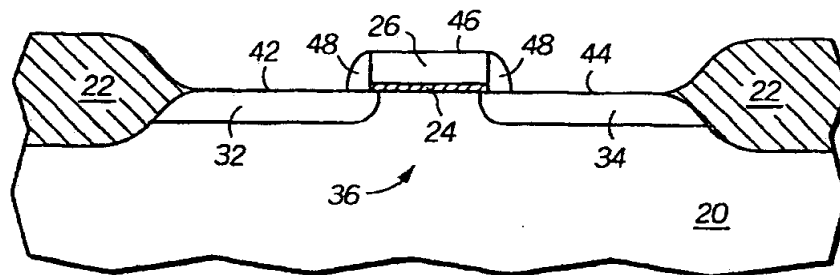


FIG. 4

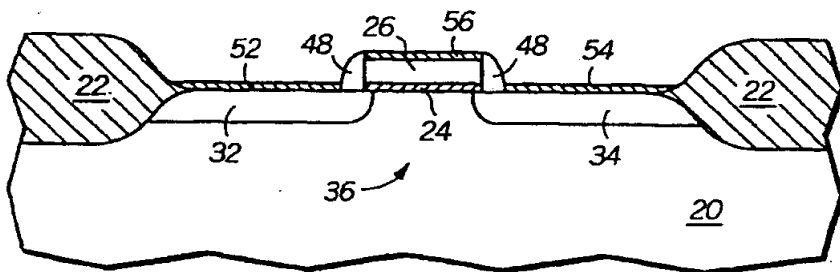


FIG. 5

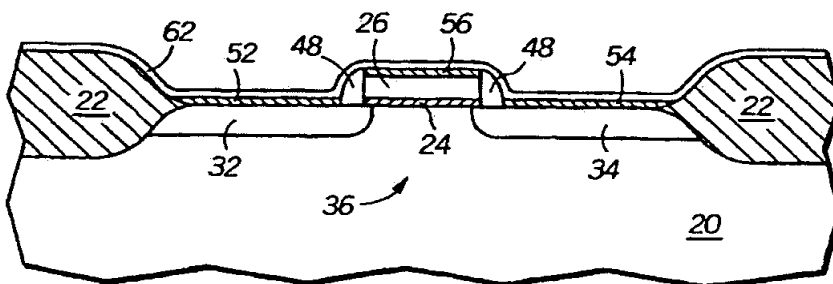


FIG. 6

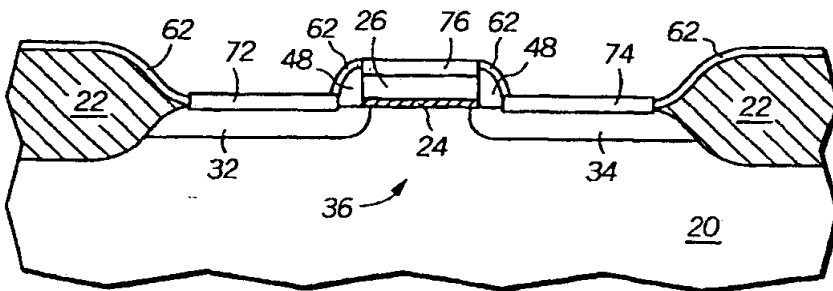


FIG. 7

Furthermore, Chen et al Fig. 6 shows that a titanium layer 62 is formed over the regions 52, 54 and 56. Moreover, Fig. 7 of the reference shows that the substrate is heated in a rapid thermal processor at a temperature of at least 700°C to form titanium disilicide regions 72 74 and 76.

In other words, Chen et al. describes forming regions 52 and 54 on the source/drain regions 32 and 34, and also forming a region 56 (made of the same materials as regions 52 and 54) on the gate electrode 26. Therefore, the titanium disilicide regions 72 and 74 (formed on the source/drain regions 32 and 34) have the same thickness as the titanium disilicide region 76 (formed on the gate electrode layer 26). Thus, it is not possible for the titanium disilicide 76 to have a thickness greater than that of the titanium disilicide regions 72 and 74.

As described above, Chen et al. does not teach or even suggest the invention defined by our amended claim 11, which includes forming a first silicide film on the source-drain diffusion layer and a second silicide film on the gate electrode, the second silicide film having a thickness greater than that of the first silicide film. Therefore, claim 11 is patentable over Chen et al. Claim 12 depends from and further limits claim 11.

New claims 20 and 21 should also be patentable because they include the combination described above as being distinguished from Chen et al.

Riseman describes that a silicon nitride layer 15 is deposited by CVD (refer to Fig. 3 and column 3, lines 7 to 8). However, the reference does not teach or suggest that a silicide film formed on a gate electrode layer has a thickness greater than that of a silicide film formed on the source/drain regions.

Thus, neither Chen et al. nor Riseman discloses amended claim 11 of the present application, which includes forming a first silicide film on the source-drain diffusion layer and a second silicide film on the gate electrode, the second silicide film having a thickness greater than that of the first silicide film. Accordingly, claim 11 is patentable over the combined teachings of Chen et al. and Riseman. As stated above, claim 12 depends from and further limits claim 11 and should thus also be allowable. New claims 20 and 21 should also be allowable for the same reasons.

For the reasons described above, the present invention is not obvious over the references.

All outstanding matters having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,
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